COMMONWEALTH of VIRGINIA

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COMMONWEALTH OF VIRGINIA
Department of Environmental Quality
Southwest Regional Office

STATEMENT OF LEGAL AND FACTUAL BASIS

Strongwell Corporation - Bristol Division
400 Commonwealth Avenue, Bristol, Virginia
Permit No. SWRO10211

Title V of the 1990 Clean Air Act Amendments required each state to develop a permit program to ensure that certain facilities have federal Air Pollution Operating Permits, called Title V Operating Permits. As required by 40 CFR Part 70 and 9 VAC 5 Chapter 80, Strongwell Corporation has applied for renewal of the Title V Operating Permit for its Bristol Division facility in Bristol, Virginia. The Department has reviewed the application and has prepared a Title V Operating Permit.

Air Permit Writer: Cliff Musick Date: 09/27/2016
Cliff Musick
(276) 676-4833

Air Permit Manager: _____ Date: 9/27/2016
Rob Feagins

Regional Director: _____ Date: 9/27/2016
Allen J. Newman, P.E.

FACILITY INFORMATION

Permittee
Strongwell Corporation
P. O. Box 580
Bristol, Virginia 24203-0580

Facility
Strongwell Corporation - Bristol Division
400 Commonwealth Avenue
Bristol, Virginia 24203

County-Plant Identification Number: 51-520-00018

SOURCE DESCRIPTION

NAICS Code: 326199 – All other plastics product manufacturing.

Strongwell Corporation manufactures fiberglass reinforced plastics at their Bristol Division facility using pultrusion and molding processes.

The pultrusion process involves drawing reinforced fibers through a liquid resin mixture. The saturated fibers are then pulled through forming guides and into a heated die. The resin chemically reacts in the die creating a solid, hard finished part as the material exits. The profile produced is then cut to length. Pultrusion resins have two basic components: base resin and monomers.

The molding process involves pouring a resin/fiberglass slurry into molds and curing.

Volatile organic compounds (VOC) and hazardous air pollutant (HAP) emissions result from evaporation of monomers during both processes. Additional VOC and HAP emissions occur during spray painting of various plastic parts and bonding of metal fittings to fiberglass rods.

The facility is a Title V major source of VOC and HAP. This source is located in an attainment area for all pollutants, and is a Prevention of Significant Deterioration (PSD) minor source. The facility is currently permitted under a minor New Source Review (NSR) permit issued on February 6, 2015, as amended December 9, 2015, and a Title V operating permit with an expiration date of April 5, 2016.

COMPLIANCE STATUS

A full compliance evaluation of this facility, including a site visit, was completed on August 4, 2014. All reports and other data required by permit conditions or regulations, which are submitted to DEQ, have been evaluated for compliance. On September 19, 2014, DEQ issued a

Notice of Violation to the company for failing to submit appropriate notification related to 40 CFR 63 Subpart DDDDD (Boiler MACT) and for exceeding a spray booth coating usage limitation. The company submitted an initial notification required by MACT DDDDD and submitted a minor new source review permit application to increase coating consumption in the spray booth (permit issued on February 6, 2015). The violations have been resolved, and no other compliance issues are pending at this time.

EMISSION UNIT AND CONTROL DEVICE IDENTIFICATION

The emissions units at this facility consist of the following:

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description	PCD ID	Pollutant Controlled	Applicable Permit Date
Fuel Burning Equipment							
B-1	B-1	One Eclipse 200 hp natural gas/No.2 fuel oil-fired tube boiler	8.375 MMBtu/hr heat input	None	-----	-----	02/06/2015 as amended 12/09/2015
B-2	B-2	One Cleaver Brooks 150 hp natural gas/No. 2 fuel oil-fired tube boiler, model CB-150p	6.277 MMBtu/hr heat input	None	-----	-----	02/06/2015 as amended 12/09/2015
B-3	B-3	One Williams and Davis 200 hp natural gas/No. 2 fuel oil-fired tube boiler, model 777	8.4 MMBtu/hr heat input	None	-----	-----	02/06/2015 as amended 12/09/2015
WR-2	WR-2	Steelman Model 8820 gas-fired curing oven	0.84 MMBtu/hr heat input	None	——	——	02/06/2015 as amended 12/09/2015
Spray Coating Equipment							
PB-1	PB-1	One 28' x 16' x 7' booth	6 lb/hr	28' x 16' x 7' booth equipped with paper filters	PB-1	Particulate	02/06/2015 as amended 12/09/2015
PB-2	PB-2	One PA ASCHE Airbrush Co., 16' x 24' x 9' paint spray booth	6 lb/hr	PA ASCHE Airbrush Co., 16' x 24' x 9' spray filter booth equipped with paper filters	PB-2	Particulate	02/06/2015 as amended 12/09/2015

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description	PCD ID	Pollutant Controlled	Applicable Permit Date
Pultrusion Equipment							
PM-1 through PM-5	DC-4 and DC-3	Strongwell, 4 cavity model; 5 machines	300 lb/hr input, each	DC-3: Farr Tenkay 40L C74122-3 7, filtered dust collector; DC-4: Farr Tenkay 241S C74881-4-B, filtered dust collector	DC-4 and DC-3	Particulate	02/06/2015 as amended 12/09/2015
PM-6, PM-7, PM-8, PM-10, PM-11, PM-13, and PM-48	DC-4 and DC-3	Strongwell, 2 cavity model, 7 machines	150 lb/hr input, each, except PM-13 which is 130 lb/hr	DC-3: Farr Tenkay 40L C74122-3 7, filtered dust collector; DC-4: Farr Tenkay 241S C74881-4-B, filtered dust collector	DC-4 and DC-3	Particulate	02/06/2015 as amended 12/09/2015
PM-14 through PM-23	DC-3	Strongwell, single cavity 6 inch model, 10 machines	130 lb/hr input, each	Farr Tenkay 40L C74122-3 7, filtered dust collector	DC-3	Particulate	02/06/2015 as amended 12/09/2015
PM-24	DC-3	Strongwell, single cavity 30 inch model, one machine	300 lb/hr input	Farr Tenkay 40L C74122-3 7, filtered dust collector	DC-3	Particulate	02/06/2015 as amended 12/09/2015
PM-25	DC-3	OEM, Inc. small rod machine, one machine	50 lb/hr input	Farr Tenkay 40L C74122-3 7,	DC-3	Particulate	02/06/2015 as amended

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description	PCD ID	Pollutant Controlled	Applicable Permit Date
				filtered dust collector			12/09/2015
PM-26	DC-3	Strongwell, single cavity, one machine	300 lb/hr input	Farr Tenkay 40L C74122-3 7, filtered dust collector	DC-3	Particulate	02/06/2015 as amended 12/09/2015
PM-9, and PM-27	DC-4 and DC-3	PTI 3008 Pultrusion, two machines	300 lb/hr input, each	DC-3: Farr Tenkay 40L C74122-3 7, filtered dust collector; DC-4: Farr Tenkay 241S C74881-4-B, filtered dust collector	DC-4 and DC-3	Particulate	02/06/2015 as amended 12/09/2015
PM-28	DC-3	Pulstar 3008 pultrusion, one machine	300 lb/hr input	Farr Tenkay 40L C74122-3 7, filtered dust collector	DC-3	Particulate	02/06/2015 as amended 12/09/2015
PM-29	DC-3	Strongwell, 3 cavity model, one machine	200 lb/hr input	Farr Tenkay 40L C74122-3 7, filtered dust collector	DC-3	Particulate	02/06/2015 as amended 12/09/2015
PM-30, PM-31, PM-34, PM-35, PM-37,	DC-1	Strongwell, single cavity 14 inch model, 7 machines	150 lb/hr input, each	Arrington-Curtis No.2, filtered dust collector	DC-1	Particulate	02/06/2015 as amended 12/09/2015

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description	PCD ID	Pollutant Controlled	Applicable Permit Date
PM-39, and PM-40							
PM-36	DC-1	Strongwell, 60 inch model, one machine	500 lb/hr input	Arrington-Curtis No.2, filtered dust collector	DC-1	Particulate	02/06/2015 as amended 12/09/2015
PM-43, and PM-44	DC-3	Gastrusion recip. pultrusion, 2 machines	150 lb/hr input, each	Farr Tenkay 40L C74122-3 7, filtered dust collector	DC-3	Particulate	02/06/2015 as amended 12/09/2015
PM-46	DC-8	Strongwell, single cavity model, one machine	500 lb/hr input	W.W. SYL Pactecon filtered dust collector	DC-8	Particulate	02/06/2015 as amended 12/09/2015
PM-50	DC-3	Strongwell, single cavity tube model, one machine	200 lb/hr input	Farr Tenkay 40L C74122-3 7, filtered dust collector	DC-3	Particulate	02/06/2015 as amended 12/09/2015
PM-90	DC-8	Strongwell, single cavity model, one machine	750 lb/hr, input	W.W. SYL Pactecon filtered dust collector	DC-8	Particulate	02/06/2015 as amended 12/09/2015
Molded Grating Operation							
MG-1	No stack	Various Strongwell open molds	108 ft2/hr	None	-----	-----	02/06/2015 as amended 12/09/2015

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description	PCD ID	Pollutant Controlled	Applicable Permit Date
Chrome Plating Operation							
CP-1	CP-2	Rapid Electric Technologies D.C. Power, 3000 Amp, 2-12 V, 36 KW,	8 lb/hr	KCH Spectra 5/4000 composite mesh-pad system	CP-2	Hexavalent chromium	02/06/2015 as amended 12/09/2015
Resin Mixing and Storage Equipment							
Mix	No stack	Strongwell resin mixing room	5 tons/hr output	None	-----	-----	02/06/2015 as amended 12/09/2015
T-1 through T-6	No stack	Resin bulk storage tanks	6,768 gallons storage capacity, each	None	-----	-----	02/06/2015 as amended 12/09/2015
T-8	No stack	Solvent bulk storage tank	2,401 gallons storage capacity	None	-----	-----	02/06/2015 as amended 12/09/2015

*The Size/Rated capacity is provided for informational purposes only, and is not an applicable requirement.

EMISSIONS INVENTORY

A copy of the 2014 Emission Statement is attached. Emissions are summarized in the following tables.

Pollutant	2014 Emissions (T/yr)
VOC	27.33
CO	0.67
SO_2	0
PM_{10}	0.12
NO_x	0.8
Styrene	18.8

EMISSION UNIT APPLICABLE REQUIREMENTS - Fuel Burning Equipment; Natural Gas/Distillate Oil-fired Boilers: B-1, B-2, B-3, and Gas-fired Process Heater WR-2

Limitations

In the absence of any specific standard from Chapter 50 of State Regulations, boilers, B-1, B-2, and B-3, are subject to emission standards outlined in 9 VAC 5-40, Article 8, Emission Standards for Fuel Burning Equipment. Each boiler was installed prior to October 5, 1979; therefore, in accordance with 9 VAC 5-40-890 C, the boilers, B-1, B-2, and B-3, together, are considered a fuel burning equipment installation. WR-2 was constructed in late 2015 and has an input heat capacity lower than the exemption level for this rule, so WR-2 has no requirements from Chapter 40 of State Regulations. Unit B-4 is a small gas-fired water heater (0.84 MMBtu/hr) that also has no requirements from Chapter 40.

The following section of the Virginia Administrative Code applies to boilers B-1, B-2, and B-3:

9 VAC 5-40-900: Standard for Particulate Matter.

According to 9 VAC 5-40-900 A.1.b, the fuel burning equipment installation may emit no more particulate matter (PM) than can be calculated by the following formula:

$$E = 1.0906\ H^{-0.2594}$$

Where E is pounds of PM per million Btu input and H is total capacity in million Btu per hour (B-1 + B-2 + B-3). The resulting PM emission ratio for the fuel burning equipment installation is then:

$$E = 1.0906(8.375 + 6.277 + 8.4)^{-0.2594}$$
$$E = 0.48\ \text{lb/MMBtu}$$

This emission ratio is included in the permit for each fuel burning unit B-1, B-2, and B-3.

The following section of the Virginia Administrative Code applies to the fuel burning equipment installation:

9 VAC 5-40-930: Standard for Sulfur Dioxide.

According to 9 VAC 5-40-930 A.1, the fuel burning equipment installation may emit no more sulfur dioxide (SO_2) than can be calculated by the following formula:

$S = 2.64K$

Where S is the allowable emission of SO_2 expressed in pounds per hour and K is the heat input at total capacity expressed in million Btu per hour. The resulting SO_2 emission standard for the fuel burning equipment installation is then:

$S = 2.64(8.375 + 6.277 + 8.4)$,
$S = 60.86$ lb/hr.

This emission rate is included in the permit.

The following section of the Virginia Administrative Code applies to each boiler exhaust stack:

9 VAC 5-50-290: Standard for Visible Emissions.

According to 9 VAC 5-50-290, the provisions of 9 VAC 5 Chapter 50, Part II, Article 1, Standards of Performance for Visible Emissions and Fugitive Dust/Emissions, apply. Those provisions limit discharge into the atmosphere from any affected facility any visible emissions, which exhibit greater than 20% opacity, except for one six-minute period in any one hour of not more than 30% opacity. This opacity limit is included in the permit for each boiler exhaust stack, B-1, B-2, and B-3.

WR-2 is a natural gas-fired unit, and is not considered a source of visible emissions or fugitive dust emissions.

The approved fuels for each fuel burning unit, B-1, B-2, and B-3, is natural gas and distillate oil. Distillate oil is defined as fuel oil that meets the specifications for fuel oil numbers 1 and 2 under the American Society for Testing and Materials, ASTM D396-78 "Standard Specification for Fuel Oils." While this is not a requirement of the minor NSR permit, it was added to the Title V permit in order to ensure that the above-mentioned emission limitations are federally enforceable and achievable.

40 CFR 63 Subpart DDDDD – Boiler MACT

Units B-1, B-2, B-3, and WR-2 appear to be subject to this rule for boilers and process heaters at major sources of hazardous air pollutants (HAP). Units B-1, B-2, and B-3 are natural gas/distillate oil-fired boilers of capacity less than 10 MMBtu/hr heat input each. Unit B-4 is represented as a natural gas-fired water-heating boiler rated at 0.84 MMBtu/hr input heat capacity, which meets the exclusion requirements of 40 CFR 63.7491(d) pertaining to water heaters (<1.6 MMBtu/hr). Units B-1, B-2, B-3, and B-4 were installed prior to June 4, 2010, and are considered existing units. There appear to be no applicable emission limits for the units. Because it is so small and has no requirements, B-4 is considered insignificant.

Unit WR-2 is a natural gas-fired curing oven rated at 0.84 MMBtu/hr heat input, and was installed late in 2015, making it a new unit (installed after June 4, 2010). There appear to be no applicable emission limits for process heaters like unit WR-2.

Monitoring

Compliance with applicable emission standards for the fuel burning equipment will be monitored through good operation and maintenance of each fuel burning unit. Good operation and maintenance shall consist of operation and maintenance in accordance with the manufacturer's recommendations, as indicated in 9 VAC 5-50-20E. Each operator shall be trained according to the manufacturer's recommendations and a copy of all relevant operation, maintenance, and specification documentation as provided by the manufacturer for each unit and device shall be maintained on the premises of the facility for each unit.

Periodic monitoring for each fuel burning unit, B-1, B-2, B-3, and WR-2 shall consist of:

- Documentation of initial and periodic operator training. This documentation shall include, at a minimum: (i) the date of training and the names of the trainer and trainees, (ii) the type of training (initial, periodic, etc.), and (iii) a copy of the training material; and

- Documentation of all operational adjustments and maintenance.

The applicable emission standards in 9 VAC 5 Chapter 40 for PM and SO_2 are based on the maximum capacity of each unit, B-1, B-2, and B-3. Therefore, if each fuel burning unit is operated at capacity, or below, using only approved fuels, there should be no violation of the emission standards. Calculations demonstrating compliance are included in Attachment A.

Compliance with the SO_2 emission standard will be monitored by requiring the permittee to obtain a certification from the fuel supplier with each shipment of distillate oil. Each fuel supplier certification shall include the following:

- The name of the fuel supplier;

- The date on which the oil was received;

- The volume of distillate oil delivered in the shipment;
- A statement that the oil complies with the American Society for Testing and Materials specifications for fuel oil numbers 1 and 2; and
- The sulfur content of the oil.

Compliance with the PM and opacity standards will be monitored by visible emissions observations performed on boilers, B-1, B-2, and B-3, during periods of normal unit operation for a sufficient time interval to determine if there are any visible emissions. If visible emissions are observed during these weekly observations, or at any other time, visible emissions evaluations (VEE) in accordance with 40 CFR Part 60, Appendix A, Method 9 will be conducted on those units with visible emissions. The VEE will be conducted for a minimum of six (6) minutes. If any of the observations exceed twenty percent (20%) opacity, the VEE will be conducted for a total of sixty (60) minutes. A Method 9 evaluation will not be required if the visible emissions condition is corrected as expeditiously as practicable such that no visible emissions are present; the emissions unit is operating at normal conditions; and the cause and corrective measures taken are recorded. A record of each visible emissions observation will be maintained, including at a minimum, the date, time, name of the emission unit, the applicable visible emissions requirement, the results of the observation, and the name of the observer.

Since WR-2 is exclusively gas-fired, visible emissions are not anticipated and no periodic visible emissions observations are necessary.

<u>40 CFR 63 Subpart DDDDD – Boiler MACT</u>
The following MACT requirements appear to apply:

§63.7500(e)-(f), §63.7540(a), Table 3 – Existing boilers and process heaters that burn gas 1 fuels and are $\leq$ 5 MMBtu/hr heat input must complete a tune-up every 5 years; units > 5 < 10 MMBtu/hr heat input must complete a tune-up every 2 years. Units B-1, B-2, and B-3 are also subject to a one-time energy assessment. WR-2 does not appear to be subject to an energy assessment. Work practice standards of Table 3, #5 & #6, do not apply to any of the units since no emission limits from the other tables apply.

§63.7510(e) – Initial tune-ups and energy assessments for units B-1, B-2, and B-3 were completed prior to January 31, 2016.

§63.7515(d) – The initial tune-up for WR-2 must be performed within 5 years of startup. Subsequent tune-ups for units B-1, B-2, B-3, and WR-2 must be performed according to the applicable 5-year or 2-year schedules.

§63.7540(a)(11)-(12) – Tune-ups must be conducted according to §63.7540(a)(10)(i)-(vi).

§63.7540(a)(13) – If units are not operating when tune-ups are required, they must be performed within 30 days of startup.

Recordkeeping

In accordance with 9 VAC 5-50-50 and 9 VAC 5-80-110, the permittee will maintain records of the following:

- Written operating procedures, maintenance schedules, and operational adjustments for each fuel burning unit, B-1, B-2, B-3, and WR-2 which can be used to determine emissions;
- Initial and periodic operator training;
- Fuel supplier certifications;
- All visible emission observations and evaluations; and
- Emission factors and equations used to calculate actual emission rates of particulate matter and sulfur dioxide.

40 CFR 63 Subpart DDDDD – Boiler MACT

§63.7555(a), (h)-(j) – Keep records of reports and notifications; hours per year that alternative fuels are used; date, time and duration of each startup and shutdown; types and amounts of fuels used during startup and shutdown.

§63.7560 – Records must be accessible on-site for 5 years.

Testing

The permit does not require source testing. The Department and EPA have authority to require testing not included in this permit if necessary to determine compliance with an emission limit or standard.

Reporting

40 CFR 63 Subpart DDDDD – Boiler MACT

§63.7540(b) – Report failures to comply with work practices in Table 3 as deviations.

§63.7545(b) – Submission of Initial Notifications has been completed, so this requirement no longer applies.

§63.7545(e)(1) & (8) – Submission of Notification of Compliance Status report to include unit descriptions, certifications of tune-ups and energy assessments, and a statement that "No secondary materials that are solid waste were combusted in any affected unit."

§63.7545(f) – Submit a notification of alternative fuel use within 48 hours of the declaration of each period of gas curtailment.

§63.7550(a)-(c), (h) – Submit Compliance Reports on a biennial schedule for B-1, B-2, and B-3, and a 5-year schedule for WR-2. The content of the report includes items described in paragraph (c)(5)(i)-(iv), and (xiv). The reports must be submitted electronically according to paragraph (h).

As part of this permit application, the company requested that DEQ agree to allow the company to submit semiannual, annual, biennial, and 5-year MACT reports according to a schedule which coincides with other Title V reports. 40 CFR 63.10(a)(5) authorizes DEQ to accomplish this by mutual agreement with the company. The reporting deadlines will be changed to March 1 and September 1 following the relevant reporting period.

EMISSION UNIT APPLICABLE REQUIREMENTS - Spray Coating Equipment: PB-1 and PB-2

Limitations

The following limitations are state Best Available Control Technology (BACT) requirements from the minor NSR Permit issued February 6, 2015 (as amended December 9, 2015):

Condition 2: Particulate emissions from spray booths, PB-1 and PB-2, shall be controlled by paper filters;

Condition 11: Throughput of coatings to spray booth PB-2 shall not exceed 116 pounds per hour and 25 tons per year;

Condition 12: The VOC content of coatings applied in spray booth PB-2 shall not exceed 60 percent by weight;

Condition 13: The solids content of coatings applied in spray booth PB-2 shall not exceed 88 percent by weight;

Condition 14: Emissions from the operation of spray booth PB-2 shall not exceed the following:

VOC	69.6	lb/hr	15.0	tons/yr

Condition 17: Visible emissions from each spray booth, PB-1, and PB-2, shall not exceed 5% opacity as determined by EPA Method 9 (reference 40 CFR 60, Appendix A). This condition applies at all times except during startup, shutdown and malfunction.

As an existing general use coating source, 9 VAC 5-60-100, Subpart PPPP of Virginia air pollution regulations and the following provisions of 40 CFR Part 63, Subpart PPPP - National Emission Standards for Hazardous Air Pollutants for Surface Coating of Plastic Parts and Products, apply to spray booth PB-2:

- 40 CFR 63.4490(b)(1): Hazardous air pollutant (HAP) emissions not to exceed 0.16 pound HAP per pound coating solids;
- 40 CFR 63.4491(a) & (b): Compliance options include the compliant material option and the emission rate without add-on control option;
- 40 CFR 63.4492(a): No operating limits are required for the Compliant Material option or the Emission Rate Without Add-on Controls option;
- 40 CFR 63.4493(a): No work practice standards are required for the Compliant Material option or the Emission Rate Without Add-on Controls option; and
- 40 CFR 63.4500(a)(1): General compliance requirements.

In previous years, spray booth PB-1 was used for coating operations at the facility. Booth PB-1 was no longer used for coating operations after the construction of spray booth PB-2 in 1993. However, it is referred to in the NSR permit as spray booth PB-1, and is subject to control and opacity requirements. There are no coating operations conducted in booth PB-1 and there is no coating equipment (spray guns, dip tanks, etc.) in booth PB-1. Therefore, the provisions of 40 CFR Part 63, Subpart PPPP do not apply to PB-1. PB-1 is now used for fabrication that requires sanding or cutting of parts; therefore, paper filters are required for control of particulate emissions.

Monitoring

The monitoring and recordkeeping requirements in Condition 19 of the NSR permit have been modified to meet Part 70 requirements.

Use of paper filters to control particulate emissions from each booth, PB-1 and PB-2, will be monitored by visible emissions observations and maintaining records of air pollution control device operating procedures and maintenance, based on the manufacturer's recommendations, at minimum.

Annual hours of operation of spray booth PB-2 will be monitored by maintaining records of monthly and annual hours of operation. Annual hours of operation will be calculated monthly as the sum of each consecutive 12-month period.

Hourly and annual throughput of coatings to spray booth PB-2 will be monitored by maintaining records of monthly and annual amounts and types of coatings throughput to the booth. Annual throughput will be calculated monthly as the sum of each consecutive 12-month period. Hourly

throughput will be calculated by dividing monthly throughput of coatings by the monthly hours of operation.

Hourly and annual limits established for VOC emissions from spray booth PB-2 are based on throughput limits in Condition 11 of the NSR permit. Conditions 12 and 13 limit VOC and solids content of coatings to be applied and support the VOC emissions limitation. No particulate matter emissions limitation was established in the NSR permit because it was expected to be very small. Regarding VOC, coating throughput is the factor that determines emission rates. Calculations have been included in Attachment B to demonstrate that if Strongwell Corporation-Bristol Division processes all that is permitted, then the emission limits will not be violated. Recordkeeping demonstrating compliance with the throughput limits can be used to demonstrate compliance with the VOC emission limits and satisfy the periodic monitoring requirement.

In a previous Title V permit, a condition was established requiring the company to test quarterly each coating material applied in PB-2 in order to verify the VOC content, whenever VOC emissions exceeded 50% of the VOC emission limitation. EPA requested this language over apparent concerns about the reliability of coating material formulation data. This requirement pre-dated requirements of MACT PPPP (which relates to Total Volatile Hydrocarbon and HAP). This language also pre-dated the widespread availability of certified product data sheets for coating-related materials. The company has not triggered this requirement to date. This testing requirement places significant burdens on the company to conduct independent testing using EPA approved methodologies when manufacturer's data is readily available. Thus far, there have been no indications that the formulation data under represents VOC emissions from these coating materials. The company proposes to remove this requirement, relying upon more accessible formulation data, available through data sheets, to estimate emissions of VOC for purposes of periodic monitoring. DEQ considers this approach to be acceptable. DEQ still has the authority to require such testing should it become necessary.

Visible emission limitations will be monitored by visible emissions observations. Visible emissions observations are to be performed daily on each spray booth exhaust, PB-1 and PB-2, during periods of normal unit operation for a sufficient time interval to determine if there are any visible emissions. If visible emissions are observed during these daily observations, or at any other time, visible emissions evaluations (VEE) in accordance with 40 CFR 60, Appendix A, Method 9 will be conducted on those units with visible emissions. The VEE will be conducted for a minimum of six (6) minutes. If any of the observations exceed five percent (5%), the VEE will be conducted for a total of sixty (60) minutes. A Method 9 evaluation will not be required if the visible emissions condition is corrected as expeditiously as practicable such that no visible emissions are present; the emissions unit is operating at normal conditions; and the cause and corrective measures taken are recorded. A record of each visible emissions observation will be maintained, including, at a minimum, the date, time, name of the emission unit, the applicable visible emissions requirement, the results of the observation, and the name of the observer.

9 VAC 5-60-100, Subpart PPPP of Virginia air pollution regulations and the following provisions of 40 CFR Part 63, Subpart PPPP - National Emission Standards for Hazardous Air Pollutants for Surface Coating of Plastic Parts and Products, apply to spray booth PB-2:

- 40 CFR 63.4540 and 4541: The facility used the Compliant Material option during the initial compliance period and completed the initial compliance demonstration in accordance with the provisions of 40 CFR 63.4540 and 4541. These initial compliance requirements and the initial compliance requirements in 40 CFR 63.4550 and 4551 for the Emission Rate without Add-on Controls option are no longer applicable and have been removed from the Title V permit.

- 40 CFR 63.4542: Continuous compliance requirements for the Compliant Material option;

- Language in Condition 28 of the Title V permit reflects the description of a compliance period as referenced in 40 CFR 63.4542(a).

- 40 CFR 63.4552: Continuous compliance requirements for the Emission Rate Without Add-on Controls option.

- Language in Condition 29 of the Title V permit reflects the description of a compliance period as referenced in 40 CFR 63.4542(a).

Recordkeeping

In accordance with 9 VAC 5-50-50 and Condition 19 of the NSR permit, the permittee will maintain records of the following:

- All visible emissions observations and evaluations;

- Air pollution control device operating procedures and maintenance based on the manufacturer's recommendations, at minimum;

- Monthly and annual hours of operation of spray booth PB-2;

- Hourly, monthly and annual throughput of each coating to spray booth PB-2;

- MSDS of all materials used in coating and cleanup operations;

- VOC and solids content of each coating, thinner, additive and cleaning material; and

- Annual VOC emissions from spray booth PB-2.

9 VAC 5-60-100, Subpart PPPP of Virginia air pollution regulations and the following provisions of 40 CFR Part 63, Subpart PPPP - National Emission Standards for Hazardous Air Pollutants for Surface Coating of Plastic Parts and Products, are applicable:

- 40 CFR 63.4530 and 4531: Recordkeeping requirements.

Testing

The permit does not require source tests. The Department and EPA have authority to require testing not included in this permit if necessary to determine compliance with an emission limit or standard. Condition 5 of the NSR permit requires the company to provide the facility for testing should it be requested.

Reporting

9 VAC 5-60-100, Subpart PPPP of Virginia air pollution regulations and the following provisions of 40 CFR Part 63, Subpart PPPP - National Emission Standards for Hazardous Air Pollutants for Surface Coating of Plastic Parts and Products, are applicable:

- 40 CFR 63.4510 and 4520: Notification and reporting requirements.

The notification of compliance status required by 40 CFR 63.4510(c) was received by DEQ on May 28, 2008; therefore, reference to this requirement has been removed from the Title V permit. The first semiannual compliance report required by 40 CFR 63.4520(a)(1)(i) was received by DEQ on July 10, 2008; therefore, reference to this requirement has been removed from the Title V permit.

As part of this permit application, the company requested that DEQ agree to allow the company to submit semiannual and annual MACT reports according to a schedule which coincides with other Title V reports. 40 CFR 63.10(a)(5) authorizes DEQ to accomplish this by mutual agreement with the company. The reporting deadlines will be changed to March 1 and September 1 following the relevant reporting period.

EMISSION UNIT APPLICABLE REQUIREMENTS - Pultrusion Equipment (PM-1 – PM-11, PM-13 – PM-31, PM-34 – PM-37, PM-39, PM-40, PM-43, PM-44, PM-46, PM-48, PM-50, PM-90)

Limitations

The following limitations are State BACT requirements from the minor NSR Permit issued February 6, 2015 (as amended December 9, 2015):

- Condition 3: Particulate emissions from cutting operations associated with the pultrusion equipment shall be controlled by fabric filters;

- Condition 4: The pultrusion units shall be labeled with their appropriate reference numbers such that labels are readily visible;

- Condition 8: Throughput of styrene resin mix to the pultrusion equipment shall not exceed 3,600 lb/hr and 7,560 tons/yr;

- Condition 9: Throughput of methyl methacrylate resin mix to the pultrusion equipment shall not exceed 300 lb/hr and 720 tons/yr;

- Condition 10: Throughput of TYBON 289D17 or equivalent phenolic resin mix to the pultrusion equipment shall not exceed 312 lb/hr and 750 tons/yr;

- Condition 16: Emissions from the operation of all the facility's pultrusion equipment shall not exceed the following:

VOC	43.32	lb/hr	92.87	tons/yr

- Condition 18: Visible emissions from the fabric filter exhausts shall not exceed 5% opacity as determined by EPA Method 9 (reference 40 CFR 60, Appendix A). This condition applies at all times except during startup, shutdown and malfunction.

As an existing reinforced plastic composites production facility with no centrifugal casting or continuous lamination/casting operations, 9 VAC 5-60-100, Subpart WWWW of Virginia air pollution regulations and the following provisions of 40 CFR Part 63, Subpart WWWW - National Emission Standards for Hazardous Air Pollutants: Reinforced Plastic Composites Production, apply to the pultrusion operation:

- 40 CFR 63.5805(b): Emission limitation for pultrusion in Table 3 and work practice standards for pultrusion of large parts and cleaning in Table 4;

- 40 CFR 63.5830(b) – (e): Compliance options for existing pultrusion operations; and

- 40 CFR 63.5835(a): General requirements for compliance with the emission limitation for pultrusion in Table 3 and the work practice standard for cleaning in Table 4 of the subpart.

There are no add-on control devices at the facility for HAP emissions from pultrusion equipment. Therefore, the emissions capture and control option in 40 CFR 63.5830(a) is not included in the permit.

Monitoring

The monitoring and recordkeeping requirements in Condition 19 of the NSR permit have been modified to meet Part 70 requirements.

Use of fabric filters to control particulate emissions from the pultrusion equipment will be monitored by visible emission observations and maintaining records of air pollution control device operating procedures and maintenance based on the manufacturer's recommendations, at minimum.

The hourly and annual limits established for VOC emissions from the pultrusion equipment are based on styrene resin mix, methyl methacrylate resin mix and phenolic resin mix throughput limitations contained in Conditions 8, 9, and 10 of the NSR permit. Regarding VOC, resin mix throughput is the factor that determines emission rates. Calculations have been included in Attachment C to demonstrate that if Strongwell Corporation-Bristol Division processes all that is permitted, then the emission limits will not be violated. Recordkeeping demonstrating compliance with the throughput limits can be used to demonstrate compliance with the VOC emission limits and satisfy the periodic monitoring requirement.

Emissions from the operation of pultrusion equipment will be calculated using DEQ approved emission factors supplied by the permittee as shown below:

Styrene Resin Mix: 0.0104 lb VOC/lb of styrene resin mix;
Methyl Methacrylate Resin Mix: 0.0104 lb VOC/lb of methyl methacrylate resin mix; and
Phenolic Resin Mix: 0.00243 lb VOC/lb of phenolic resin mix.

Labeling of all pultrusion equipment with the appropriate reference number will be monitored by maintaining a log of all pultrusion equipment at the facility containing the corresponding reference numbers.

Visible emission limitations will be monitored by visible emissions observations. Visible emissions observations are to be performed daily on the fabric filter exhausts during periods of normal unit operation for a sufficient time interval to determine if there are any visible emissions. If visible emissions are observed during these daily observations, or at any other time, visible emissions evaluations (VEE) in accordance with 40 CFR 60, Appendix A, Method 9 will be conducted on those units with visible emissions. The VEE will be conducted for a minimum of six (6) minutes. If any of the observations exceed five percent (5%), the VEE will be conducted for a total of sixty (60) minutes. A Method 9 evaluation will not be required if the visible emissions condition is corrected as expeditiously as practicable such that no visible emissions are present; the emissions unit is operating at normal conditions; and the cause and corrective measures taken are recorded. A record of each visible emissions observation will be maintained, including, at a minimum, the date, time, name of the emission unit, the applicable visible emissions requirement, the results of the observation, and the name of the observer.

9 VAC 5-60-100, Subpart WWWW of Virginia air pollution regulations and the following provisions of 40 CFR Part 63, Subpart WWWW - National Emission Standards for Hazardous Air Pollutants: Reinforced Plastic Composites Production, apply to the pultrusion operation:

- 40 CFR 63.5895(c) and (e): Monitoring and data collection requirements for resin use and wet area enclosures; and

- 40 CFR 63.5900(a)(2) and (a)(4): Continuous compliance demonstration requirements.

Recordkeeping

The permittee will maintain records of the following:

- All visible emissions observations and evaluations;

- Air pollution control device operating procedures and maintenance based on the manufacturer's recommendations, at minimum;

- Emission factors used to calculate VOC and styrene emissions from pultrusion equipment operation;
- Pultrusion equipment reference numbers;

- Hourly, monthly and annual throughput of each type resin mix to the pultrusion equipment;

- Monthly and annual hours of operation of the pultrusion equipment;

- A copy of each notification and report submitted to comply with the permit; and

- A certified statement of compliance with the work practice requirements.

9 VAC 5-60-100, Subpart WWWW of Virginia air pollution regulations and the following provisions of 40 CFR Part 63, Subpart WWWW - National Emission Standards for Hazardous Air Pollutants: Reinforced Plastic Composites Production, apply to the pultrusion operation:

- 40 CFR 63.5895(c) and (e): Recordkeeping requirements for resin use and wet area enclosures; and

- 40 CFR 63.5915 and 5920: Recordkeeping requirements.

Testing

The permit does not require source tests. The Department and EPA have authority to require testing not included in this permit if necessary to determine compliance with an emission limit or standard. Condition 5 of the NSR permit requires the company to provide the facility for testing should it be requested.

Reporting

9 VAC 5-60-100, Subpart WWWW of Virginia air pollution regulations and the following provisions of 40 CFR Part 63, Subpart WWWW - National Emission Standards for Hazardous Air Pollutants: Reinforced Plastic Composites Production, apply to the pultrusion operation:

- 40 CFR 63.5910: Notification and reporting requirements.

The initial notification required by 40 CFR 63.5905 was completed in May 1, 2006. The initial compliance report required by 40 CFR 63.5910(b)(1) was received by DEQ on July 25, 2006; therefore, reference to this requirement has been removed from the Title V permit.

As part of this permit application, the company requested that DEQ agree to allow the company to submit semiannual and annual MACT reports according to a schedule which coincides with other Title V reports. 40 CFR 63.10(a)(5) authorizes DEQ to accomplish this by mutual agreement with the company. The reporting deadlines will be changed to March 1 and September 1 following the relevant reporting period.

EMISSION UNIT APPLICABLE REQUIREMENTS - Molded Grating Operation: MG-1 (various open molds)

Limitations

The following limitations are State BACT requirements from the minor NSR permit issued February 6, 2015 (as amended December 9, 2015):

- Condition 6: Total annul throughput of polyester resin or methyl methacrylate resin to the fiberglass grating production equipment shall not exceed 608.18 tons/yr;

- Condition 7: Annual throughput of styrene monomer to the fiberglass grating production equipment shall not exceed 79.65 tons/yr; and

- Condition 15: Emissions from the fiberglass grating production equipment shall not exceed the following:

VOC	8.47	lb/hr	25.45	tons/yr

The molded grating process at the facility meets the definition of polymer casting indicated in 40 CFR 63.5935 of Subpart WWWW - National Emission Standards for Hazardous Air Pollutants: Reinforced Plastic Composites Production. Composite materials are poured into open grating molds and cured. The materials are not rolled out or worked while in the mold, except for smoothing or vibrating to remove bubbles. 40 CFR 63.5790(c) indicates polymer casting is excluded from any requirements in the subpart. Therefore, while the molded grating operation at the facility is subject to Subpart WWWW, there are no applicable requirements.

Monitoring and Recordkeeping

The monitoring and recordkeeping requirements in Condition 19 of the NSR permit have been modified to meet Part 70 requirements.

The annual limit established for VOC emissions from the molded grating operation is based on annual throughput limits contained in Conditions 6 and 7 of the NSR permit. Calculations have been included in Attachment D to demonstrate that if Strongwell Corporation-Bristol Division processes all that is permitted or less, then the annual emission limit will not be violated. Recordkeeping demonstrating compliance with throughput limits can be used to demonstrate compliance with VOC emission limits and satisfy the periodic monitoring requirement.

The hourly VOC emission limit is based on maximum capacity of the fiberglass grating production equipment. Therefore, if the fiberglass grating equipment is operated at capacity, or below, there should not be a violation of the emission standard.

The permittee will maintain records of the following:

- Monthly and annual hours of operation of the open molding operation;
- Annual throughput of each type resin mix to the fiberglass grating production equipment;
- Annual throughput of styrene monomer to the fiberglass grating production equipment; and
- Emission factors used to calculate emissions from the open molding process.

Testing

The permit does not require source tests. The Department and EPA have authority to require testing not included in this permit if necessary to determine compliance with an emission limit or standard. Condition 5 of the NSR permit requires the company to provide the facility for testing should it be requested.

Reporting

There are no specific reporting requirements for the molded grating operation.

EMISSION UNIT APPLICABLE REQUIREMENTS – Resin Mixing and Storage Equipment: Mix, T-1 through T-6, and T-8

Limitations

As an existing reinforced plastic composites production facility with no centrifugal casting or continuous lamination/casting operations, 9 VAC 5-60-100, Subpart WWWW of Virginia air pollution regulations and the following provisions of 40 CFR Part 63, Subpart WWWW - National Emission Standards for Hazardous Air Pollutants: Reinforced Plastic Composites Production, apply to the resin mixing and storage operations:

- 40 CFR 63.5835(a): General compliance requirements and applicable work practice standards for material storage and cleaning in Table 4 of the subpart.

Monitoring and Recordkeeping

9 VAC 5-60-100, Subpart WWWW of Virginia air pollution regulations and the following provisions of 40 CFR Part 63, Subpart WWWW - National Emission Standards for Hazardous Air Pollutants: Reinforced Plastic Composites Production, apply to the resin mixing and storage operations:

- 40 CFR 63.5805(b): Work practice standards for cleaning in Table 4 of the subpart;
- 40 CFR 63.5900(a)(4): Continuous compliance demonstration requirements for work practice standards for existing mixing, storage and cleaning operations; and
- 40 CFR 63.5915 and 5920: Recordkeeping requirements.

The permittee will maintain records of the following:

- A copy of each notification and report submitted to comply with the permit; and
- A certified statement of compliance with the work practice requirements.

Testing

The permit does not require source tests. The Department and EPA have authority to require testing not included in this permit if necessary to determine compliance with an emission limit or standard. Condition 5 of the NSR permit requires the company to provide the facility for testing should it be requested.

Reporting

9 VAC 5-60-100, Subpart WWWW of Virginia air pollution regulations and the following provisions of 40 CFR Part 63, Subpart WWWW - National Emission Standards for Hazardous Air Pollutants: Reinforced Plastic Composites Production, apply to the resin mixing and storage operations:

- 40 CFR 63.5910: Notification and reporting requirements.

The initial compliance report required by 40 CFR 63.5910(a)(1) was received by DEQ on July 25, 2006; therefore, reference to this requirement has been removed from the Title V permit.

As part of this permit application, the company requested that DEQ agree to allow the company to submit semiannual and annual MACT reports according to a schedule which coincides with other Title V reports. 40 CFR 63.10(a)(5) authorizes DEQ to accomplish this by mutual agreement with the company. The reporting deadlines will be changed to March 1 and September 1 following the relevant reporting period.

EMISSION UNIT APPLICABLE REQUIREMENTS - Chrome Plating Operation: CP-1

Limitations

The permittee operates a chromium electroplating process used to resurface production equipment at their facility. The permittee's chromium electroplating equipment, installed before December 16, 1993, has a maximum rectifier capacity of less than 60 million ampere-hours per year. A composite mesh-pad system is used to control emissions from the chromium electroplating operation. The permittee is subject to 9 VAC 5-60-100, Subpart N of Virginia air pollution regulations and 40 CFR Part 63, Subpart N, National Emission Standards for Chromium Emissions from Hard and Decorative Chromium Electroplating and Chromium Anodizing Tanks (Chromium Electroplating MACT). The permit contains all applicable limitations from the Chromium Electroplating MACT pertaining to small existing sources. The permittee is also subject to sections of 40 CFR 63, Subpart A, General Provisions as identified by Table 1 of Subpart N. Applicable limitations from the general provisions are also included in the permit.

The permittee conducted initial performance testing in 1996, as required by the Chromium Electroplating MACT. These tests indicated compliance with applicable emission requirements. In accordance with 40 CFR 63.343(c)(1)(ii), the limitations section of the Title V permit has been revised to require the permittee to operate the mesh pad system such that the pressure drop across the system equals the average differential pressure drop of 2.8 inches of water column documented in the test report instead of the pressure drop range indicated in the previous Title V permit.

The limitations section of the Title V permit has been revised in accordance with the September 19, 2012 Residual Risk and Technology Review Amendments for 40 CFR Part 63 Subpart N. This rule change reduced the total chromium emission standards for existing small hard chrome electroplating sources to 0.015 mg/dscm (40 CFR 63.342(c)(1)(ii)). Also, the revised rule requires that specific housekeeping requirements be implemented according to 40 CFR 63.342 Table 2.

The following Virginia Administrative Codes that have specific emission requirements are applicable:

- 9 VAC 5-50-290: Standard for Visible Emissions.

According to 9 VAC 5-50-290, the provisions of Article 1 of 9 VAC 5 Chapter 50 apply. Those provisions limit discharge into the atmosphere from any affected facility any visible emissions, which exhibit greater than 20% opacity, except for one six-minute period in any one hour of not more than 30% opacity. This opacity limit for the chrome electroplating process exhaust, CP-2, is included in the permit.

Monitoring

The permit contains applicable requirements from the Chromium Electroplating MACT for continuous compliance, including quarterly monitoring of work practice standards and daily monitoring of air pollution control system parameters. The Chromium Electroplating MACT contains adequate monitoring to meet the periodic monitoring requirements; therefore, no additional monitoring requirements are incorporated into the Title V permit.

Compliance with the opacity standard, as indicated by 9 VAC 5-50-290, will be monitored by visible emissions observations. Visible emissions observations are to be performed weekly during periods of normal unit operation for a sufficient time interval to determine if there are any visible emissions. If visible emissions are observed during these weekly observations, or at any other time, visible emissions evaluations (VEE) in accordance with 40 CFR 60, Appendix A, Method 9 will be required. The VEE will be conducted for a minimum of six (6) minutes. If any of the observations exceed twenty percent (20%), the VEE will be conducted for a total of sixty (60) minutes. A Method 9 evaluation will not be required if the visible emissions condition is corrected as expeditiously as practicable such that no visible emissions are present; the emissions unit is operating at normal conditions; and the cause and corrective measures taken are recorded. A record of each visible emissions observation will be maintained, including, at a minimum, the date, time, name of the emission unit, the applicable visible emissions requirement, the results of the observation, and the name of the observer.

Recordkeeping

The permit contains applicable requirements from the Chromium Electroplating MACT for recordkeeping, including records pertaining to inspection, maintenance, malfunction, performance tests, monitoring data, excess emissions, and processes.

The permittee will maintain records of all visible emission observations and evaluations.

Testing

The permit does not require source tests. The Department and EPA have authority to require testing not included in this permit if necessary to determine compliance with an emission limit or standard.

Reporting

The permit contains applicable requirements from the Chromium Electroplating MACT for reporting of ongoing compliance status as well as emission limit exceedances indicated by ongoing monitoring of air pollution control system operating parameters. The permit requires this reporting to be submitted concurrently with the reporting requirements contained in 9 VAC 5-80-110.

As part of this permit application, the company requested that DEQ agree to allow the company to submit semiannual and annual MACT reports according to a schedule which coincides with other Title V reports. 40 CFR 63.10(a)(5) authorizes DEQ to accomplish this by mutual agreement with the company. The reporting deadlines will be changed to March 1 and September 1 following the relevant reporting period.

GENERAL CONDITIONS

The permit contains general conditions required by 40 CFR Part 70 and 9 VAC 5-80-110, that apply to all federal operating permit sources. These include requirements for submitting semi-annual monitoring reports and an annual compliance certification report. The permit also requires notification of deviations from permit requirements or any excess emissions, including those caused by upset, within one business day.

Comments on General Conditions

Permit Expiration

This condition refers to the State Air Pollution Control Board taking action on a permit application. The authority to take action on permit application(s) has been delegated to the Regions as allowed by §§2.2-604 and §10.1-1185 of the *Code of Virginia,* and the "Department of Environmental Quality Agency Policy Statement No. 2-2003."

Failure/Malfunction Reporting

Section 9 VAC 5-20-180 requires malfunction and excess emission reporting within four hours of discovery. Section 9 VAC 5-80-250 of the Title V regulations also requires malfunction reporting; however, reporting is required within two days. Section 9 VAC 5-20-180 is from the general regulations. All affected facilities are subject to section 9 VAC 5-20-180 including Title V facilities. Section 9 VAC 5-80-250 is from the Title V regulations. Title V facilities are subject to both sections. A facility may make a single report that meets the requirements of 9 VAC 5-20-180 and 9 VAC 5-80-250. The report must be made within four daytime business hours of discovery of the malfunction.

Malfunction as an Affirmative Defense

The regulations contain two reporting requirements for malfunctions that coincide. The reporting requirements are listed in sections 9 VAC 5-80-250 and 9 VAC 5-20-180. The malfunction requirements are listed in General Condition U and General Condition F. For further explanation see the comments on General Condition F.

Asbestos Requirements

The Virginia Department of Labor and Industry under Section 40.1-51.20 of the Code of Virginia also holds authority to enforce 40 CFR 61, Subpart M, National Emission Standards for Asbestos.

FUTURE APPLICABLE REQUIREMENTS

No future applicable requirements are known at this time.

INAPPLICABLE REQUIREMENTS

New Source Performance Standard (NSPS) Requirements for Polymeric Coating of Supporting Substrates in 40 CFR Part 60, Subpart VVV, and 9 VAC 5-50-410, are not applicable as indicated by the non-applicability determination memorandum from Michael S. Alushin, Director, Compliance Assessment and Media Programs Division, Office of Compliance, U.S. Environmental Protection Agency, dated March 20, 2001. Differences between the fiberglass reinforced plastic pultrusion process and the processes described in the Background Information Document (BID) for NSPS Subpart VVV include, but are not limited to the following:

- All coated materials discussed in the BID are polymers; the permittee's process utilizes monomeric styrene;
- The pultrusion process does not utilize solvents; the styrene monomer is liquid with physical properties sufficient for processing;
- There are no flashoff, drying or curing ovens associated with the pultrusion process; they are unnecessary due to the fact that no solvents are used that need to be dried and the styrene monomer is transformed to polystyrene upon heating the liquid in the forming die. The Grieve curing oven permitted in the current NSR Permit is used to cure resin residue in empty drums. It is not used for production;
- The finished product is a structural component and completely rigid, not capable of being rewound and is totally inflexible as it comes off the production line; and
- The fiberglass-reinforcing matrix is not a substrate to be coated or merely impregnated. It is a critical, supporting structure.

New Source Performance Standard (NSPS) Requirements for Volatile Organic Liquid Storage Vessels in 40 CFR Part 60, Subpart Kb, and 9 VAC 5-50-410, are not applicable. According to application information, the storage capacity of each volatile organic liquid storage vessel at the facility is less than the applicable capacity indicated by the standards.

The MACT standard for halogenated solvent cleaning in 40 CFR Part 63, Subpart T, and 9 VAC 5 Chapter 60, Part II, Article 2, Subpart T are not currently applicable. The facility does not use any halogenated cleaning solvents in its parts washer, SR-1.

Results of the calculations in Attachment E of this Statement of Basis indicate the fuel burning equipment, B-1 through B-4, and WR-2, has the potential to emit approximately 17,034 short tons, or 15,453 metric tons, of carbon dioxide-equivalent (CO_{2e}) per year. The provisions of 40 CFR Part 98 – Mandatory Greenhouse Gas Reporting require owners and operators of general stationary fuel combustion sources that emit 25,000 metric tons CO_{2e} or more per year in combined emissions from such units, to report greenhouse gas (GHG) emissions, annually. The definition of "applicable requirement" in 40 CFR 70.2 and 71.2 does not include requirements such as those included in Part 98, promulgated under Clean Air Act (CAA) section 114(a)(1) and 208. Therefore, the requirements of 40 CFR Part 98 are not applicable under the Title V permitting program.

The current state minor NSR permit for the Strongwell Corporation – Bristol Division facility contains no GHG-specific applicable requirements and there have been no modifications at the facility requiring a PSD permit. Therefore, there are no applicable requirements for the facility specific to GHG.

INSIGNIFICANT EMISSION UNITS

The insignificant emission units are presumed to be in compliance with all requirements of the Clean Air Act as may apply. On this basis, no monitoring, recordkeeping or reporting shall be required for these emission units in accordance with 9 VAC 5-80-110.

Insignificant emission units include the following:

Emission Unit No.	Emission Unit Description	Citation[1] (9 VAC_)	Pollutant Emitted (5-80-720 B.)	Rated Capacity (5-80-720 C.)
T-7	Distillate oil bulk storage tank	5-80-720-B.2 & B.5	VOC	8,000 gallons storage capacity
T-9	Powdered clay bulk storage tank	5-80-720-B.1	Particulate Matter	3,000 cubic feet storage capacity
FAB	Fabrication and Hand lay-up area	5-80-720 B.2	VOC and HAP	0.5 ton/hr, output
LBR	Laboratory and burn room	5-80-720 A.28	Particulate Matter	0.5 lb/hr, output
B-4	Precision, low pressure, natural gas-fired boiler	5-80-720 C.2.a	PM-10, VOC, NOx, SO_2, CO	0.84 MMBtu/hr heat input

[1]The citation criteria for insignificant activities are as follows:
9 VAC 5-80-720 A - Listed Insignificant Activity, Not Included in Permit Application
9 VAC 5-80-720 B - Insignificant due to emission levels
9 VAC 5-80-720 C - Insignificant due to size or production rate

The resin mixing room (Mix), resin bulk storage tanks (T-1 through T-6), and solvent bulk storage tank (T-8), are listed in the application as insignificant units/activities; however, the Reinforced Plastics Composite MACT contains requirements applicable to this equipment. Therefore, Mix, T-1 through T-6, and T-8 are not included in the table of insignificant emission units.

The company reports that the Pull Block molding process (PBM-2) and the Fiber Bolt operation (FRB), previously identified as insignificant activities, have been removed from the facility as of 2016.

CONFIDENTIAL INFORMATION

The permittee did not submit a request for confidentiality. All portions of the Title V application are suitable for public review.

PUBLIC PARTICIPATION

A public notice regarding the draft/proposed permit was published in the Bristol Herald Courier newspaper in Bristol, Virginia on August 17, 2016. Copies of the draft permit and public notice were sent to the EPA by electronic mail on August 11, 2016. The documents were made available for concurrent review by EPA and the public.

A copy of the public notice was sent to Kentucky, North Carolina and Tennessee as affected states on August 17, 2016.

A copy of the public notice was sent to all persons on the Title V mailing list by postal mail, electronic mail, or facsimile on August 17, 2016.

Public comments were accepted from August 18, 2016 through September 16, 2016. No comments were received from the public or affected states regarding the draft permit.

EPA contacted DEQ on September 23, 2016 stating that no comments would be given on the draft/proposed permit.

Attachment A

Strongwell Corporation - Bristol Division
Registration No. 10211

Emissions of Particulate Matter and Sulfur Dioxide from Fuel Burning Equipment, B-1, B-2, and B-3, Based on Maximum Capacity

Emissions are calculated using current emission factors for these types of units. There are no add-on pollution control devices associated with the affected boilers. Since each of these units can burn either distillate oil or natural gas, particulate and sulfur dioxide emissions from burning each type of fuel will be considered. According to information provided, total maximum input heat capacity of all units is 8.375 + 6.277 + 8.4 + 0.84 + 0.84 = 24.73 MMBtu/hr.

Maximum consumption of natural gas by the boilers B-1 through B-4 and the curing oven is:

$(24.73 \times 10^6$ Btu/hr)/1000 Btu/ft^3 = 0.0247 million cubic feet/hr

Maximum consumption of distillate oil by boilers B-1 through B-3 is:

$(8.375 + 6.277 + 8.4) = 23.05 \times 10^6$ Btu/hr

$(23.05 \times 10^6$ Btu/hr)/140,000 Btu/gal = 164.6 gal/hr

PARTICULATE MATTER

Particulate emissions from the fuel burning installation operating at maximum capacity and consuming natural gas are calculated as follows:

Particulate emission factor:	7.6 lbs/million cubic feet burned	SCC 10200603
Total maximum burned/hr:	0.0247 million cubic feet	Source information
Total installation capacity:	23.05 MMBtu/hr	Source information

(0.0247 million cubic feet/hr)(7.6 lbs/million cubic feet)/(23.05 MMBtu/hr) = 0.008 lb/MMBtu.

Particulate emissions from the fuel burning installation operating at maximum capacity and consuming distillate oil are calculated as follows:

Particulate emission factor:	2 lbs/1000 gallons burned	SCC 10200503
Total maximum burned/hr:	164.6 gallons	Source information
Total installation capacity:	23.05 MMBtu/hr	Source information

(164.6 gallons/hr)(2 lb/1000 gallons)/(23.05 MMBtu/hr) = 0.01 lb/MMBtu.

A comparison of calculated particulate emissions from the fuel burning installation operating at maximum capacity burning either type of fuel to the particulate emission ratio as indicated by 9 VAC 5-40-900A (0.48 lb/MMBtu), demonstrates compliance.

SULFUR DIOXIDE

Emission limits are based on the maximum possible emissions from distillate oil containing 0.5% sulfur by weight. Since each of these units can burn either distillate oil or natural gas, sulfur dioxide emissions from burning each type of fuel will be considered. Sulfur dioxide emissions from the fuel burning installation operating at maximum capacity and consuming natural gas are calculated as follows:

Sulfur dioxide emission factor:	0.6 lb/million cubic feet burned	SCC 10200603
Total maximum burned/hr:	0.0247 million cubic feet	Source info.

(0.0247 million cubic feet/hr)(0.6 lb/million cubic feet) = 0.015 lb/hr.

Sulfur dioxide emissions from the fuel burning installation operating at maximum capacity and consuming distillate oil are calculated as follows:

Sulfur dioxide emission factor:	143.6(S) lb/1000 gallons burned S = % sulfur by weight	SCC 10200503
Total maximum burned:	164.6 gallons/hr	Source info.

(164.6 gallons/hr)(143.6(0.5) lb/1000 gallons) = 11.8 lb/hr.

A comparison of calculated sulfur dioxide emissions to the sulfur dioxide emission standard as indicated by 9 VAC 5-40-930A.1 (60.86 lb/hr) demonstrates compliance.

Attachment B

Strongwell Corporation - Bristol Division
Registration No. 10211

VOC Emissions from Spray Booth PB-2 Based on Throughput Limits

The engineering evaluation for the February 6, 2015 permit for spray booth PB-2 estimates VOC emissions based on permit limitations on total coating consumption (116 lb/hr and 25 T/yr) and maximum VOC content (60 wt%) of the coating material. Particulate matter emissions were predicted based on maximum coating solids content (88 wt%) and particulate matter control by paper filters (98% control). Particulate matter emissions were predicted to be negligible.

VOLATILE ORGANIC COMPOUNDS

There are no add-on controls for VOC emissions from spray booth PB-2.

Total hourly VOC emissions = (116 lb/hr)(0.6) = 69.6 lb/hr.

Total annual VOC emissions = (25 T/yr)(0.6) = 15.0 tons/yr.

As long as these consumption limitations are observed, compliance is predicted.

Attachment C

Strongwell Corporation - Bristol Division
Registration No. 10211

VOC Emissions from Pultrusion Equipment Based on Throughput Limits

Emissions from pultrusion machine operation are calculated using DEQ approved emission factors as shown below:

Styrene Resin Mix : 0.0104 lb VOC/lb of styrene resin mix
Methyl Methacrylate Resin Mix: 0.0104 lb VOC/lb of methyl methacrylate resin mix
Phenolic Resin Mix: 0.00243 lb of VOC/lb of phenolic resin mix

The previous engineering evaluation predicted particulate emissions from pultrusion machine operation to be negligible as controlled by Best Available Control Technology (BACT) required by 9 VAC Chapter 50 and subsequent New Source Review permit conditions. These BACT requirements include fabric filtration, throughput limitations and visible emission limitations. Throughput to the pultrusion equipment is limited to no more than 3600 lb/hr and 7560 tons/yr of styrene resin mix, 300 lb/hr and 720 tons/yr of methyl methacrylate resin mix, and 312 lb/hr and 750 tons/yr of phenolic resin mix.

VOLATILE ORGANIC COMPOUNDS

Uncontrolled VOC emissions are calculated as follows:

Styrene Resin Mix
(3600 lb/hr)(0.0104 lb VOC/lb mix) = 37.44 lb/hr;
(7560 tons/yr)(0.0104 lb VOC/lb mix) = 78.62 tons/yr.

Methyl Methacrylate resin Mix
(300 lb/hr)(0.0104 lb VOC/lb mix) = 3.12 lb/hr;
(720 tons/yr)(0.0104 lb VOC/lb mix) = 7.49 tons/yr.

Phenolic Resin Mix
(312 lb/hr)(0.00243 lb phenol as VOC/ lb mix) = 0.76 lb phenol/hr;
(312 lb/hr)(0.5% formaldehyde as VOC) = 1.56 lb formaldehyde/hr;

(750 tons/yr)(0.00243 lb phenol as VOC/lb mix) = 1.82 tons phenol/yr;
(750 tons/yr)(0.5% formaldehyde as VOC) = 3.75 tons formaldehyde/yr;

Total hourly VOC emissions from pultrusion machine operation = 42.88 lb/hr.

Total annual VOC emissions from pultrusion machine operation = 91.68 tons/yr.

A comparison of the hourly (43.32 lb/hr) and annual (92.87 tons/yr) VOC emissions limits to predicted VOC emissions based on throughput limits demonstrates compliance.

Attachment D

Strongwell Corporation - Bristol Division
Registration No. 10211

VOC Emissions from the Open Molding (fiberglass grating) Operation, MG-1, Based on Throughput Limits

A review of the initial evaluation of the open molding operation indicates the maximum capacity of the operation is 54 grating parts per 24 hours (2.25 parts/hr) using a combined total of 101.9 pounds of resin and monomer per part. The VOC emissions factor based on resin and monomer throughput is 70.26 pounds VOC per ton of resin and monomer combined. The current NSR permit limits total annual throughput of polyester (styrene) resin or methyl methacrylate resin to the open molding operation to no more than 608.18 tons/yr and annual throughput of styrene monomer to no more than 79.65 tons/yr. If the permittee uses the maximum permitted amount of resin and monomer, VOC emissions from the open molding operation are predicted as follows:

(70.26 lb VOC/ton)(2.25 parts/hr)(101.9 lb/part)(1 ton/2000 lb) = 8.05 lb VOC/hr
(70.26 lb VOC/ton)(687.83 tons/yr)(1 ton/2000 lb) = 24.16 tons VOC/yr

A comparison of the hourly (8.47 lb/hr) and annual (25.45 tons/yr) VOC emissions limits to predicted VOC emissions based on throughput limits demonstrates compliance.

Attachment E

Strongwell Corporation - Bristol Division
Registration No. 10211

Greenhouse Gas Emissions from the Fuel Burning Equipment, B-1 through B-4, and WR-2, Based on Maximum Capacity

Emissions are calculated using emission factors from AP-42. There are no add-on pollution control devices associated with the fuel burning equipment. Since each of the boilers, B-1 through B-3, can burn distillate oil or natural gas, emissions of greenhouse gases (GHG) from burning each type of fuel in those units will be considered. Boiler B-4 and the curing oven, WR-2, combust only natural gas. According to information provided, total maximum input heat capacity of all units is 8.375 + 6.277 + 8.4 + 0.84 + 0.84 = 24.73 MMBtu/hr.

Maximum consumption of natural gas by the boilers and curing oven is:

(24.73 MMBtu/hr)/1000 Btu/ft^3 = 0.0247 million cubic feet/hr

Maximum consumption of distillate oil by boilers B-1 through B-3 is:

(8.375 + 6.277 + 8.4) = 23.05 MMBtu/hr

(23.05 x MMBtu/hr)/140,000 Btu/gal = 164.6 gal/hr

CARBON DIOXIDE

Carbon dioxide (CO_2) emissions from the boilers B-1 through B-4 and the curing oven WR-2 operating at maximum capacity on **natural gas** are calculated as follows:

CO_2 emission factor: 120,000 lbs/10^6 cubic feet burned AP-42 Table 1.4-2

(0.0247 million cubic feet/hr)(120,000 lbs/million cubic feet) = 2964 lbs/hr
(2964 lbs/hr)(8,760 hr/yr)(0.0005 ton/lb) = 12,982 tons/yr

CO_2 emissions from the boilers B-1 through B-3 operating at maximum capacity on **distillate oil** are calculated as follows:

CO_2 emission factor: 22,300 lbs/1000 gal burned AP-42 Table 1.3-12

(164.6 gallons/hr)(22,300 lb/1000 gallons) = 3,670.6 lb/hr
(3,670.6 lb/hr)(8,760 hr/yr)(0.0005 ton/lb) = 16,077.2 tons/yr

The above calculations indicate worse case CO_2 emissions of 16,077.2 tons/yr from distillate oil combustion by boilers B-1 through B-3.

CO_2 emissions from the natural gas-fired curing oven WR-2 and boiler B-4 operating at maximum capacity are calculated as follows:

CO_2 emission factor: 120,000 lbs/10^6 cubic feet burned AP-42 Table 1.4-2

(0.84 MMBtu/hr + 0.84 MMBtu/hr)/1000 Btu/ft^3 = 0.00168 million cubic feet/hr
(0.00168 million cubic feet/hr)(120,000 lbs/million cubic feet) = 201.6 lbs/hr
(201.6 lbs/hr)(8,760 hr/yr)(0.0005 ton/lb) = 883.0 tons/yr

Total worse case CO_2 emissions from the fuel burning equipment are 16,077.2 + 883.0 = 16,960.2 tons/yr

METHANE

Methane (CH_4) emissions from the boilers B-1 through B-4 and the curing oven WR-2 operating at maximum capacity on **natural gas** are calculated as follows:

CH_4 emission factor: 2.3 lbs/10^6 cubic feet burned AP-42 Table 1.4-2

(0.0247 million cubic feet/hr)(2.3 lbs/million cubic feet) = 0.057 lbs/hr
(0.057 lbs/hr)(8,760 hr/yr)(0.0005 ton/lb) = 0.25 tons/yr

CH_4 emissions from the boilers B-1 through B-3 operating at maximum capacity on **distillate oil** are calculated as follows:

CH_4 emission factor: 0.052 lbs/1000 gal burned AP-42 Table 1.3-3

(164.6 gallons/hr)(0.052 lb/1000 gallons) = 0.009 lb/hr
(0.009 lb/hr)(8,760 hr/yr)(0.0005 ton/lb) = 0.04 ton/yr

CH_4 emissions from the natural gas-fired curing oven WR-2 and B-4 operating at maximum capacity are calculated as follows:

CH_4 emission factor: 2.3 lbs/10^6 cubic feet burned AP-42 Table 1.4-2

(0.84 MMBtu/hr + 0.84 MMBtu/hr)(1 ft^3/1000 Btu) = 0.00168 million cubic feet/hr
(0.00168 million cubic feet/hr)(2.3 lbs/million cubic feet) = 0.0039 lbs/hr
(0.0039 lbs/hr)(8,760 hr/yr)(0.0005 ton/lb) = 0.017 ton/yr

Total worse case CH_4 emissions from distillate oil combustion in B-1 through B-3 and natural gas combustion in B-4 and WR-2 are 0.04 ton/yr + 0.017 ton/yr = 0.057 ton/yr.

Total worse case CH_4 emissions from the fuel burning equipment are 0.25 tons/yr. A factor of 21 for Global Warming Potential, as indicated in 40 CFR Part 98, is applied to the worse case

methane emissions to calculate a CO_2 equivalent (CO_{2e}) of 5.25 tons CO_{2e}/yr.

NITROUS OXIDE

Nitrous oxide (N_2O) emissions from the boilers B-1 through B-4 and the curing oven WR-2 operating at maximum capacity on **natural gas** are calculated as follows:

N_2O emission factor: 2.2 lbs/10^6 cubic feet burned AP-42 Table 1.4-2

(0.0247 million cubic feet/hr)(2.2 lbs/million cubic feet) = 0.05 lbs/hr
(0.05 lbs/hr)(8,760 hr/yr)(0.0005 ton/lb) = 0.22 ton/yr

N_2O emissions from the boilers B-1 through B-3 operating at maximum capacity on **distillate oil** are calculated as follows:

N_2O emission factor: 0.11 lbs/1000 gal burned AP-42 Table 1.3-8

(164.6 gallons/hr)(0.11 lb/1000 gallons) = 0.018 lb/hr
(0.018 lb/hr)(8,760 hr/yr)(0.0005 ton/lb) = 0.079 ton/yr

Nitrous oxide (N_2O) emissions from the boiler B-4 and the curing oven WR-2 operating at maximum capacity on **natural gas** are calculated as follows:

N_2O emission factor: 2.2 lbs/10^6 cubic feet burned AP-42 Table 1.4-2

(0.00168 million cubic feet/hr)(2.2 lbs/million cubic feet) = 0.0037 lbs/hr
(0.0037 lbs/hr)(8,760 hr/yr)(0.0005 ton/lb) = 0.016 ton/yr

Total worse case N_2O emissions from distillate oil combustion in B-1 through B-3 and natural gas combustion in B-4 and WR-2 are 0.079 ton/yr + 0.016 ton/yr = 0.095 ton/yr.

The above calculations indicate worse case N_2O emissions of 0.22 ton/yr from natural gas combustion by the boilers B-1 through B-4 and the curing oven WR-2.

A factor of 310 for Global Warming Potential, as indicated in 40 CFR Part 98, is applied to the worse case N_2O emissions to calculate 68.2 tons CO_{2e}/yr.

Total GHG emissions from the boilers are 17,033.65 short tons CO_{2e}/yr, or 15,452.7 metric tons CO_{2e}/yr.

2014 Emissions Data: